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IN THE
Supreme Court of the United States

October Term, 1986

STATE OF TEXAS,

Plaintiff,

v.

STATE OF NEW MEXICO,

Defendant,

UNITED STATES OF AMERICA,

Intervenor.

**NEW MEXICO'S EXCEPTIONS TO THE
REPORT OF THE SPECIAL MASTER AND
BRIEF IN SUPPORT OF EXCEPTIONS**

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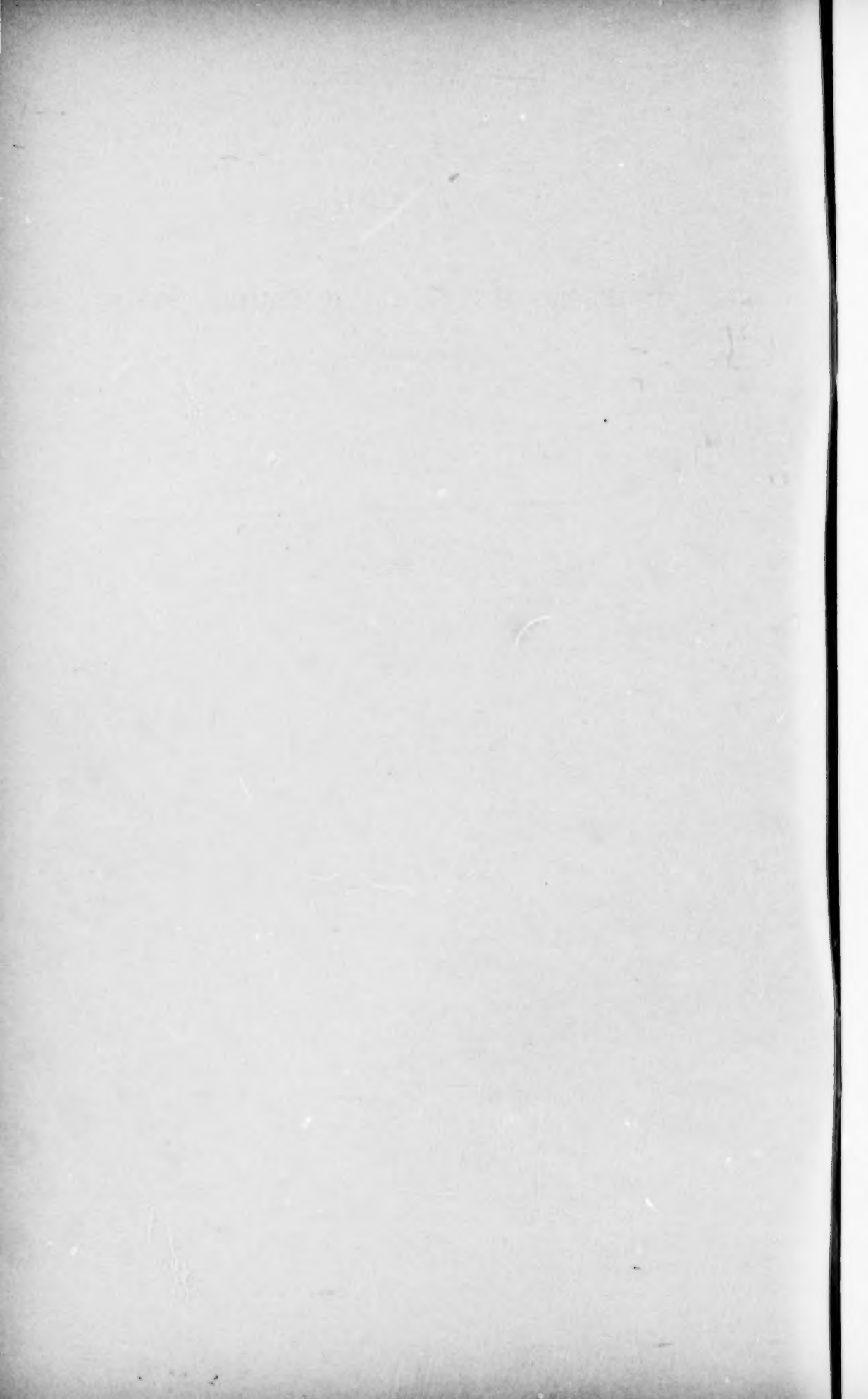
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IN THE
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October Term, 1986

STATE OF TEXAS,
Plaintiff,

v.

STATE OF NEW MEXICO,
Defendant,

UNITED STATES OF AMERICA,
Intervenor.

**EXCEPTIONS TO THE
REPORT OF THE SPECIAL MASTER**


The State of New Mexico objects to the Report of the Special Master which was accepted for filing on October 6, 1986.

1. New Mexico objects to the Master's recommended finding that New Mexico depleted by man's activities 340,100 acre-feet of the flows of the Pecos River at the state line during the 34-year period, 1950-83. The Master failed to hold an evidentiary hearing on the extent to which the deficiency in stateline flows was due to man's activities in New Mexico, ignoring a critical qualification on New Mexico's obligation to deliver water under the Pecos River Compact.

2. New Mexico objects to the Master's recommended conclusion that retroactive relief is required by the Pecos River Compact. There is no express or necessarily implied covenant in the Compact requiring the payment of past delivery shortfalls, the Compact negotiators rejected delivery schedules and debit-credit accounting, and retroactive relief would be inequitable in this case.

3. New Mexico objects to the relief recommended by the Master, even if retroactive relief were permissible and appropriate in this case. The Master failed to balance the equities of the benefit to Texas and the harm to New Mexico and improperly imposed water interest payments.

New Mexico requests the Court to reject the Master's recommendations on the award of retroactive relief under the Pecos River Compact and to return the case to the Master with directions to hear evidence and make specific recommended findings on the amount of the shortfall in stateline departures caused by man's activities in New Mexico. If New Mexico's exceptions under paragraphs 2 and 3 are overruled, the Court should instruct the Master to balance the equities and determine the monetary damages that New Mexico might pay in lieu of water deliveries.

Respectfully submitted, 

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STATE OF TEXAS,

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Intervenor.

**NEW MEXICO'S BRIEF IN SUPPORT OF
EXCEPTIONS TO THE REPORT OF
THE SPECIAL MASTER**

QUESTIONS PRESENTED

1. Whether New Mexico is entitled to an evidentiary hearing on the extent to which man's activities depleted the Pecos River flow at the state line when the Pecos River Compact limits her responsibility for depletions to those caused only by man's activities in New Mexico.

2. Whether New Mexico may properly be ordered to provide retroactive relief to Texas, on an expedited basis and with the possibility of water interest, when the Compact negotiators rejected debit-credit accounting and delivery schedules under the Pecos River Compact and when the definition of the 1947 condition was not finally resolved until 1984.
3. Whether, before any retroactive relief is permitted, New Mexico is entitled to an evidentiary hearing which properly develops an adequate record on which to find an equitable remedy.

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JURISDICTION

The original jurisdiction of the Court was invoked and exists under Article III, section 2, clause 2 of the Constitution of the United States and 28 U.S.C. § 1251(a).

STATUTE INVOLVED

The Pecos River Compact, 63 Stat. 159 (1949), N.M. Stat. Ann. § 72-15-19 (1978) and Tex. Water Code Ann. § 43.010 (Vernon 1972). A copy of the Pecos River Compact is in the appendix to this brief at page B-1.

STATEMENT OF THE CASE

1. In 1948 the states agreed to define and limit New Mexico's obligation under the Compact by "man's activities" in New Mexico.

The Pecos River Compact of 1948 (Compact) was a compromise: Texas bargained for and got the "1947 condition" allocation and New Mexico bargained for and got the "man's activities" protection. A federal representative explained to Congress:

The compact reflects a compromise On the one hand, New Mexico has agreed to settlement on the basis of '1947 conditions' This is offset by the agreement of Texas that nonbeneficial consumptive use of water, due to non-man-made activities, would not be chargeable against New Mexico in determining her obligation to deliver water at the New Mexico-Texas State line.

Letter from Acting Secretary of the Interior in S. Doc. No. 109, 81st Cong., 1st Sess. xv (1949) (S. Doc. 109) Stip. Exhibit 1.

New Mexico thus agreed that Texas would continue to receive the same proportion of water she had received under the "1947 condition" in exchange for Texas' commitment not to hold New Mexico liable for any excess depletions unless those depletions were due to man's activities in New Mexico. New Mexico bargained for this limitation, determining her responsibility in terms of man's activities because she did not wish to risk or bear responsibility for the depletions due to natural or undefined causes on the Pecos River. The Pecos River has long been recognized as extraordinarily difficult:

For its size, the basin of the Pecos River probably presents a greater aggregation of problems associated with land and water use than any other irrigated basin in the western United States.

National Resources Planning Board, *The Pecos River Joint Investigation* at vi (1942), Stip. Exhibit 11(b).

Royce J. Tipton, an internationally known consulting engineer who was chairman of the Engineering Advisory Committee to the negotiating commission and engineer advisor to the United States commissioner, told Congress in 1956 that the Pecos River, although small, "has all the problems that a big river ever had and has some . . . peculiar unto itself."¹

The Pecos was and still is a difficult river. First, its flow is extremely variable; the normal basic flow is entirely lost and re-established many times in the length of the stream. Stip. Exhibit 11(b) at 12; October 18, 1982 Special Master Report (1982 Report) at 6; October 15, 1979 Special Master Report (1979 Report) at 5-6, *confirmed*, *Texas v. New Mexico*, 446 U.S. 540 (1980); *Texas v. New Mexico*, 462 U.S. 554, 557 n.2, 574 (1983); July 29, 1986 Special Master Report (1986

¹ Hearings on S.J. Res. 155 Before the Subcommittee on Irrigation and Reclamation of the Senate Committee on Interior and Insular Affairs, 84th Cong., 2d Sess. 8 (1956). *See also* S. Doc. 109 at 2; S. Rep. No. 192, 85th Cong., 1st Sess. 4 (1957).

Report) at 31 n.12. Second, depletion at any given point on the stream is not related in direct proportion to the irrigation above that point:

As irrigation in a basin increases, more and more of the water formerly lost by natural processes is converted to beneficial use. Conversely, if irrigated areas are abandoned, the accretion to the stream at some point below the abandoned area will not be equal to the amount of water that was being consumed by the area at the point of use. This again is due to natural losses.

S. Doc. 109 at xxxiv.

Third, the Pecos River sits in a basin that is geologically, as well as hydrologically, complex. 1979 Report at 5-6. Fourth, it has numerous natural problems: frequent flooding, recurring drought, decreasing tributary inflow, poor water quality, sedimentation and large nonbeneficial uses of water by water-loving plants. S. Doc. 109 at 2; S.J. Res. 155 *supra* at 8; S. Rep. No. 192 *supra* at 4. Finally, the river is constantly changing: "Since white man has known the Pecos River, conditions on it have never been static. They have been in a continual state of flux." S. Doc. 109 at xxv, 3.

New Mexico sought to protect herself from the river's vagaries so that she would never be held liable for shortfalls to Texas unless New Mexico users were in fact responsible. To accommodate the bargain reached, the Pecos River Compact expresses the resulting water allocation under the 1947 condition in terms of man's activities:

New Mexico shall not *deplete by man's activities* the flow of the Pecos River at the New Mexico-Texas state line below an amount which will give to Texas a quantity of water equivalent to that available to Texas under the 1947 condition.

Article III(a) (emphasis added).

2. **Twenty-six years after the 1948 agreement Texas sued New Mexico claiming the water she had received during the preceding 23 years fell short of the 1947 condition by 1.2 million acre-feet.**

In 1974 Texas repudiated all previous work, agreements and actions of the Pecos River Commission and filed suit in this Court claiming she had suffered a water shortfall from 1950 through 1972 of 1.2 million acre-feet. Texas' Complaint Par. V at 4 (June 26, 1974). For 15 or 20 years, the Pecos River Commission had functioned as contemplated in the Compact. This Court's previous opinion, 462 U.S. at 560-62, provides a comprehensive factual history of the administrative proceedings. *See also* the 1979 Report at 26-30. During the 1960s, discord grew and cooperation between the states came to an end. 462 U.S. at 561 & n.9. As former Special Master Judge Breitenstein remarked of this period, "a cold reading of the minutes disclosed to me a complete lack of desire on the part of Texas to agree to anything that New Mexico wanted." Tr. at 320 (June 28, 1977).

The litigation that Texas filed fell into three phases corresponding to the terms of the water allocation in Article III(a) of the Pecos River Compact:

- the determination of the 1947 condition;
- the determination of departures from the 1947 condition; and
- the determination of the extent to which those departures were caused by "man's activities" in New Mexico.

- a. **Phase I: Redefining the 1947 condition took ten years.**

The Pecos River Compact set the basic allocation of water by the 1947 condition rather than by a fixed amount, percentage, or schedule of measured flow. The intent was to give Texas in the future essentially the same proportion of water

she had received under the 1947 condition, that is, to maintain the status quo as to depletions in man's activities in New Mexico. To define the 1947 condition, the states had prepared a reach-by-reach routing study using the inflow-outflow method. S. Doc. 109 at (Face p. 72) No. 5. Because they recognized the method might contain errors or be improved in the future, the states provided that the Pecos River Commission would have full authority to change the method or perfect the techniques or data. Compact Articles VI(a), VI(b), and VI(c); S. Doc. 109 at 117, 150-51; 462 U.S. at 574. The Commission used that authority to review and correct the basic data. Stip. Exhibit 4(b) at 247, January 31, 1961 Commission Minutes; Stip. Exhibit 8, Report on Review of Basic Data (Review of Basic Data) (October 18, 1960).

When Texas filed suit, she first argued in favor of using the data and relationships presented in S. Doc. 109. 1979 Report at 36. The Master and the Court rejected that approach. *Id.* at 41, *confirmed*, 446 U.S. 540. Texas next challenged some of the Commission's corrections to the data. February 27, 1984 Special Master Report (1984 Report) at 7-9, E-2. When only five disputed issues remained, Texas switched her approach and asked the court to abandon the inflow-outflow method presented by the Compact and impose an entirely new method known as double mass analysis. Tr. at 3348-49, 3366-67 (July 27, 1981); Tr. at 3483 (December 21, 1981). The Master and the Court rejected the double mass analysis. 1982 Report at 21, *adopted*, 462 U.S. at 574. The Court returned the matter to the Master, who determined the remaining unresolved issues to define the 1947 condition in 1984. His January 24, 1984 report was approved. *Texas v. New Mexico*, 467 U.S. 1238 (1984).

Ten years after the suit began, the 1947 condition was finally defined.

b. Phase II: Determining the departures from the 1947 condition was largely mechanical.

When this Court returned the case to the Master in 1983, the Court noted that, following final definition of the 1947 condition, two issues remained to determine whether New Mexico had fulfilled her Compact obligations. The first issue was the departures from the 1947 condition: "under the proper definition of the '1947 condition' . . . what is the difference between the quantity of water Texas could have expected to receive in each year and the quantity it actually received?" 462 U.S. at 575.

The determination of departures from the 1947 condition was expected to be a relatively mechanical application of established procedures. A new Master assumed responsibility for this portion of the case; Judge Breitenstein resigned and Charles J. Meyers took his place. *Texas v. New Mexico*, 468 U.S. 1202 (1984). As Special Master Meyers noted, the states successfully stipulated to most of the factual issues quantifying departures. 1986 Report at 2-3. The few controversies remaining over adjustments to the departures were heard in November and December 1985.

The Master then determined that the difference between the quantity of water Texas could have expected to receive under the 1947 condition from 1950 through 1983 and the quantity she actually received amounted to 425,500 acre-feet. The Master found that 340,100 acre-feet of this departure were chargeable to New Mexico. 1986 Report at 31. This departure for the 34-year period averages 10,000 acre-feet per year. The amount Texas had claimed as a departure at the outset of the suit for a 23-year period averages 52,200 acre-feet per year. The process for determining departures had taken one and one-half years. New Mexico does not contest the Master's recommended finding of 340,100 acre-feet in departures.

- c. **Phase III: The final issue, the extent to which man's activities caused the departures, was not heard but instead presumed.**

The final determination under the Compact is the finding on the extent to which departures were caused by man's activities in New Mexico. The key to the compromise New Mexico reached with Texas in 1948 was the limiting language "deplete by man's activities." This Court recognized it as a "critical qualification on New Mexico's obligation to deliver water under Art. III (a) of the Compact." 462 U.S. at 573 n.20.

There had never been a determination under the Compact that any departures from the 1947 condition were due to man's activities. The Pecos River Commission never made such a determination.² Special Master Breitenstein did not consider this issue. Special Master Meyers' Report gives the Court no foundation for determining the issue.

The Compact is clear. It defines "deplete by man's activities" as beneficial consumptive use.

The term "deplete by man's activities" means to diminish the stream flow of the Pecos River at any given point as the result of beneficial consumptive uses of water within the Pecos River Basin above such point. For the purposes of this Compact it does not include the diminution of

² In 1961 and 1962 the Commission made findings of the departures in stateline flows from the 1947 condition. Using the Review of Basic Data, the Commission found a negative departure of 53,300 acre-feet for the 1950-61 period. The Commission found that 48,000 acre-feet were caused by the McMillan Dike, but that these departures were not chargeable as a result of man's activities. The Commission did not find, or in any way imply, that the balance of 5,300 acre-feet was attributable to man's activities in New Mexico. Stip. Exhibit 4(b) at 256-57 (Commission minutes of November 9, 1962).

such flow by encroachment of salt cedars or any other like growth, or by deterioration of the channel of the stream.

Article II(e).

Royce Tipton offered further explanation of beneficial consumptive use in the legislative history:

Beneficial consumptive use of water from a technical standpoint includes the amount of water that is actually burned up by the transpiration of crops raised by man; reservoir evaporation; the evaporation from the water surface of canals; the slight amount of transpiration by native vegetation along the canals; the loss of water due to seeped areas adjacent to the area irrigated by man.

S. Doc. 109 at 112.

Despite the lack of procedural precedents, both states had anticipated from the outset of the litigation that there would be a trial segment to determine the extent to which departures, if any, were due to man's activities. *See* Master's Exhibit 2 at 4 (the May 31, 1979 letter from Richard A. Simms, attorney for New Mexico, to the Master) and Master's Exhibit 3 at 2 (the June 1, 1979 letter from Douglas Caroom, attorney for Texas, to the Master), on the schedule for the rest of the case.

Special Master Meyers also apparently contemplated a hearing on man's activities and invited the states to submit briefs on who bore the burden of proving whether and to what extent man's activities in New Mexico had caused the departures. May 22, 1985 Order. The Master did not, however, issue an order addressing these matters. Instead he set for hearing in November and December 1985 the few remaining disputes on adjustments to calculations of departures from the 1947 condition for those uses not chargeable to New Mexico.

October 10, 1985 Pretrial Order. He did not set a hearing on man's activities, the factual questions on beneficial consumptive uses in New Mexico.

"Adjustments" include those items which are easily identified as not chargeable to New Mexico and which must be made to the gross departures determined by Texas Exhibit 79 before an investigation regarding causes of departures is undertaken. The Pecos River Commission had previously determined that any stateline departures caused by the McMillan Dike and Malaga Bend would not be charged to New Mexico as depletions by man's activities. Stip. Exhibit 4(b) at 231, 238-39 (Commission minutes of January 31, 1961); *id.* at 256-57 (Commission minutes of November 9, 1962). The third adjustment was for the reach of the river above Alamogordo Dam, an adjustment which was necessary to include the entire river in New Mexico in the computation of departures at the state line. New Mexico's proposed adjustment to account for reductions of flow at Carlsbad Springs, which cannot be due to man's activities in New Mexico, was rejected by the Master. 1986 Report at 29. Once adjustments to gross departures are made, the net departures at the state line must be investigated to determine which, if any, are due to man's activities in New Mexico.

Following the November-December 1985 hearing, the Master issued a draft report in which he addressed not only the second phase of the litigation, the departures from the 1947 condition, but also the third phase, the extent to which the departures were due to man's activities. March 18, 1986 Special Master Draft Report (Draft Report). The Master decided that Texas Exhibit 79, which reflected both states' stipulations on calculated departures and was the basic analytical tool for the second phase, presumptively justified a conclusion that all remaining departures were due to man's activities. *Id.* at 9. The Master therefore has recommended that the Court find the entire 340,100 acre-foot shortfall from 1950 through 1983 due

to man's activities in New Mexico. 1986 Report at 31. New Mexico takes exception to this recommendation.

- d. Relief: The Master further recommends not only prospective injunctive relief against New Mexico, but also retroactive relief, expedited and with the possibility of water interest.**

The Master's draft report following the November-December 1985 hearing addressed not only the second phase, departures, and the third phase, man's activities, but went on to address remedy and relief. It proposed to recommend prospective relief, expedited retroactive relief and water interest. Draft Report at 30-31. The issue of appropriate relief had not been previously briefed or tried in this case and, in fact, the retroactive relief issue was not briefed until June 1986. New Mexico's Legal Memorandum on Relief under the Pecos River Compact (June 10, 1986). The Pecos River Compact does not specify relief other than corrections to meet future obligations. *See* Compact Article IX; S. Doc. 109 at 124.

The Master acceded to New Mexico's request for a hearing on relief. Following the two-day hearing in May 1986, the Master essentially confirmed his earlier proposal and recommended that the Court enjoin New Mexico to:

- (a) meet her Article III(a) obligation under the Pecos River Compact each year;
- (b) deliver to Texas at the state line an additional amount of water "aggregating" 340,100 acre-feet over a period of ten years, with an "Annual Minimum Delivery Obligation" each year of 34,010 acre-feet in addition to the amount required by Article III(a); and
- (c) pay water interest to Texas on the balance of the amount of water owed if New Mexico does not make

a good faith attempt to meet the "Annual Minimum Delivery Obligation" of 34,010 acre-feet specified above. 1986 Report at 36 and Proposed Decree, Article II, at A-1.

This ten-year period for expedited retroactive relief would compel New Mexico to curtail virtually all irrigation, municipal and other groundwater rights in the Roswell Basin, as well as all other junior uses outside of the Roswell Basin and within the Pecos River basin for at least ten years. Tr. at 39-41 (May 20, 1986). It is uncertain how many acres irrigated in Texas would benefit from this relief or how much they might be benefitted, because of the intrusion of high salinity waters in the river above the state line, which increases the water requirements of crops, and channel and distribution losses below the state line. S. Doc. 109 at 4; Stip. Exhibit 11(b) at 4.

New Mexico takes exception to the Master's recommendation to require retroactive relief for departures from the 1947 condition during the 34 years from 1950 through 1983. In addition, as previously noted, New Mexico takes exception to the Master's recommendation that all departures be deemed due to man's activities in New Mexico.

SUMMARY OF ARGUMENT

New Mexico objects to the conclusions reached by the Master regarding New Mexico's delivery obligation under the Pecos River Compact and to the procedural inadequacies of the hearings below.

The Master erred by refusing to hear evidence on the critical element under the Pecos River Compact which defines New Mexico's delivery obligation to Texas: the extent to which any negative departures from the 1947 condition were caused by man's activities in New Mexico. His failure to hear evidence on causes of departures was based on two faulty assumptions. First, he erroneously concluded that the procedures used to compute the stateline departures also determine departures caused by man's activities in New Mexico. It is not possible to determine New Mexico's obligation only by reference to indicated stateline departures. Second, by relying solely on those procedures, he failed to require Texas to bear the burden of proof on her complaint that New Mexico breached the Compact. Thus, the Master cut short the proceedings below by relying on incorrect assumptions. His reliance is contrary to the basis of the bargain struck by the states in which Texas agreed to receive an amount of water equivalent to that she received under the 1947 condition and New Mexico would bear responsibility only for those departures which were due to man's activities over and above the 1947 condition.

The Master erred by requiring retroactive relief for the accumulated departures and by imposing water interest on undelivered amounts of water. Retroactive relief is improper. First, the Compact negotiators clearly rejected an accounting system which required delivery schedules and accumulated water debits and credits. The only remedy allowed under the Compact is the curtailment of beneficial consumptive use of water in New Mexico to increase stateline flows to a level

equivalent to the flows of the Pecos River under the 1947 condition. Second, New Mexico should not be held responsible for an obligation which was uncertain and not defined until 1984. Third, there is no legal authority to impose water interest under the Compact.

The Master further erred in his recommendation that a ten-year schedule be used to pay the departures which were accrued over 34 years. He failed to develop an adequate record upon which the equities between New Mexico and Texas may be properly balanced. While New Mexico presented evidence of substantial economic harm, Texas failed to demonstrate in concrete terms her past economic losses and the benefits she would expect to receive from the delivery of 34,010 acre-feet each year for ten years. The Master also improperly refused to allow New Mexico the option of monetary payment for any past shortfalls in delivery.

ARGUMENT**I**

**BECAUSE THE MASTER REFUSED TO HOLD
AN EVIDENTIARY HEARING ON THE EXTENT
TO WHICH DEPARTURES WERE DUE TO
MAN'S ACTIVITIES IN NEW MEXICO, HE DEPRIVED
NEW MEXICO OF THE BENEFIT OF HER
BARGAIN UNDER THE COMPACT AND
ERRED IN HIS RECOMMENDATION**

- A. Man's activities, the key determination of New Mexico's obligation, should have been the subject of a full hearing.**

The Master skimmed over the key determination under the Compact, and in so doing, deprived New Mexico of the protection for which she had bargained under the Compact without an evidentiary hearing. Designating man's activities as the ultimate finding under the Compact was the foundation for New Mexico's agreement to Texas' apportionment terms. All 12 years of this litigation have been devoted to the definition of the 1947 condition and the computation of departures. When it came to the key element protecting New Mexico, the finding of the extent to which the departures were due to man's activities in New Mexico, the Master passed by swiftly. He simply made a presumption against New Mexico and bolstered it with subsequent testimony from a Texas witness. The Master should have held a hearing in which Texas bore the burden to prove the extent to which the 340,100 acre-feet of departures were due to man's activities in New Mexico.

New Mexico had bargained for the protection contained in defining New Mexico's responsibility in terms of man's activities in New Mexico. In 1948 New Mexico agreed that Texas could have water under the 1947 condition in exchange for Texas' agreement that New Mexico would be responsible only for

depletions due to man's activities in New Mexico S. Doc. 109 at 97 (Compact Commission meeting of November 13, 1948); *id.* at 125 (Compact Commission meeting of December 3, 1948). New Mexico had negotiated for that limitation to protect herself from the indeterminate causes of departures and the vagaries of the Pecos River. *Id.* at 116-17.

The negotiators consequently structured the apportionment under the Compact in terms of man's activities, and established the sole basis of New Mexico's obligation as follows:

New Mexico shall not deplete by *man's activities* the flow of the Pecos River at the New Mexico-Texas state line below an amount which will give to Texas a quantity of water equivalent to that available to Texas under the 1947 condition.

Article III(a) (emphasis added).

Had the negotiators intended that all departures be attributed to New Mexico, they could have drafted the language accordingly and the Compact would have been much simpler. Had they intended New Mexico to be responsible for all departures except for those due to channel deterioration and water-loving plants, they could have so specified and the Compact would still have been simpler. The Compact negotiators, however, did not express New Mexico's obligations in those terms, but rather in terms of an affirmative finding of the extent to which man's activities caused the departures. That was the agreement of the parties.

The Compact history makes it plain that depletion due to "man's activities" is a separate and critical finding. At the final compact commission meeting, Royce Tipton explained the Compact and it was adopted "subject to [his] explanation." S. Doc. 109 at 114, 119, 121, 126, 127. Mr. Tipton pointed out that the Commission should determine departures from the

1947 condition and then "determine the extent to which that depletion was due to man's activities in New Mexico" *Id.* at 125.

Those administering the Compact viewed New Mexico's obligation the same way. The Pecos River Commission made determinations of departures from the state line from 1950 to 1961. Stip. Exhibit 4(b) at 256-57 (Commission minutes of November 9, 1962). It determined the departures to be 53,300 acre-feet. The Commission did not then assume New Mexico was responsible for the departures. Instead, the Commission adjusted the departures by 48,000 acre-feet, the effect of the construction of the McMillan Dike on stateline flow, which the Commission had previously found should not be chargeable to New Mexico. At that point, 5,300 acre-feet in departures remained. Even then the Commission did not find, or in any way imply, that the remainder was due to man's activities in New Mexico; the Commission did not ask New Mexico to adjust its delivery at the state line.

When the Court remanded this case to the Master in 1983, the Court noted, as indicated above, that, after final determination of the 1947 condition, two issues remained before New Mexico's obligation could be defined. The first was the determination of departures from the 1947 condition, discussed above. The second was: "to what extent were the shortfalls due to 'man's activities in New Mexico?'" 462 U.S. at 575. The Court cautioned that the determination of man's activities was separate from, and not determined by, the previous analyses:

It deserves emphasis that neither the Inflow-Outflow Manual in any of its past or projected versions nor the Texas 'Double Mass Analysis' has anything to say about whether a particular shortfall in state-line water deliveries is due to 'man's activities' At best, correlation curves

for sub-reaches of the river can be helpful in identifying *where* a shortfall seems to originate.

Id. at 573 n. 20.

The states had anticipated an evidentiary hearing on, and a separate consideration of, man's activities, as had the previous Master. Tr. at 323 (June 28, 1977); October 31, 1977 Pre-Trial Order Par. 5(a)(6) at 6. That Texas understood the bargain it had made with New Mexico is clear from the record. Texas repeatedly referred to the need to determine the extent to which departures are due to man's activities in a separate phase of the trial after the determination of departures. In 1979 Texas noted:

Even after a pattern of departures from the established relationship develops, one final step remains to determine New Mexico's compliance or noncompliance with the Compact's requirements. It must be determined that the departure is caused by man's activities rather than natural causes.

Texas' Objections to the Report of the Special Master at 6 (November 28, 1979).

Counsel for Texas on another occasion noted that, once a departure trend was established, the next task would be to "go back and then determine whether or not the underdeliveries were caused by man's activities or not" Tr. at 687 (March 1, 1978). That determination would be made by a reach-by-reach analysis of the river. S. Doc. 109 at 156. Both states included a hearing for man's activities in their proposed schedules in 1979. Master's Exhibit 2 at 4; Master's Exhibit 3 at 2; *See also* 1982 Report at 19.

Special Master Meyers, however, gave short shrift to this stage of the proceedings. Having decided upon the departures

and adjustments to the departures, he saw no need to spend time and resources completing the detailed factual determination of the extent to which the remaining departures were due to man's activities in New Mexico. He simply presumed New Mexico liable for the remainder, after noting New Mexico had previously introduced no evidence on the issue. Tr. at 240-41 (May 20, 1986); Tr. at 347-49 (May 21, 1986).

The Master's action and recommendation cuts the heart out of the bargain New Mexico struck with Texas and, as the first determination on man's activities, sets a precedent dissolving the protection New Mexico had negotiated for her people in 1948. New Mexico never agreed to a Compact under which the risk of the Pecos River's variability and indeterminates would become her burden. By negotiating for an obligation defined in terms of man's activities, she sought to reduce the likelihood that New Mexico water users would be shut down to compensate for non-manmade losses on the river. She intended "hard facts, not suppositions or opinions," to be the basis of any curtailment of water use in New Mexico. See *Colorado v. New Mexico*, 467 U.S. 309, 320-21 (1984).

The Master did not probe the hard facts but, rather, skated quickly to decision. Although the Master's emphasis on efficiency is understandable, speedy resolution is less significant in this context than a resolution which will eliminate or reduce further difficulties. The context is one of decades of difficulties. Disputes over the Pecos River have flared up repeatedly for at least 60 years. 1979 Report at 10. This litigation has so far consumed 12 years which have been principally devoted to establishing the 1947 condition. Given this history, the Master's refusal to hear evidence and direct Texas to present evidence on man's activities is particularly dissonant and troubling. The Compact embodies the expectations of the states who bound themselves to it, and its key provision on obligation is worthy of a more considered interpretation.

Because of the Master's decision, New Mexico has thus far been deprived of the benefit of her bargain. The key procedural step under the Compact has been condensed to the point of virtual elimination. The Master acted improperly and in violation of the Compact by deciding man's activities on the basis of a presumption.

B. The Master's presumption on man's activities is in error.

The Master's proposed finding that the remaining departures were due to man's activities in New Mexico rests on a double assumption: first, that all natural causes of departures had been accounted for in the computation of departures in Texas Exhibit 79, and, second, that the remaining departures in Texas Exhibit 79 were necessarily due to man's activities. Both assumptions, as well as the process used to reach them, are wrong. See *Tyrell v. Dobbs Investment Co.*, 337 F.2d 761, 765 (10th Cir. 1964) ("pyramiding or imposition of one inference upon another to establish the facts necessary to [a] case" is "not permissible and amounts to mere speculation").

Texas Exhibit 79 does not distinguish between departures due to natural causes and those due to man's activities. It was created for and limited to computations of departures. It does not resolve the question whether departures were caused by man's activities. Although Texas' witness later readily agreed with the Master that Texas Exhibit 79 accounted for all natural causes of departure, Tr. at 317-18 (May 21, 1986), the history of Texas Exhibit 79 belies that understanding.

Texas prepared Exhibit 79 to compute departures as required by the Master's December 10, 1984 Pretrial Order. When Texas called its first version of Exhibit 79 "New Mexico's Delivery Obligation 1950-1983" (February 15, 1985), New Mexico promptly objected to the inference in the title that calculated departures represented her delivery obligation and Texas

changed the title to "Computations of Departures of Stateline Flows of the Pecos River from the 1947 Condition During the 1950-83 Period" (August 15, 1985). *See* New Mexico's Preliminary Report on the State of Texas' February 15, 1985 submittal at 3-4 (March 15, 1985).

After further changes and additional stipulations between the states, Texas offered Texas Exhibit 79 at the December 1985 hearing. Tr. at 103 (December 3, 1985). The exhibit did not state, nor did any previous versions state, that the computations were intended to account for all non-manmade depletions. Texas did not offer testimony to the effect that Exhibit 79 accounted for all non-manmade depletions. The exhibit was received into evidence simply as a computation of departures and New Mexico, on that basis, made no objection.

The Master's March 18, 1986 Draft Report for the first time interpreted Texas Exhibit 79 to account for all non-manmade depletions. Draft Report at 9. The Master's interpretation departed from the course of dealings between the states on Texas Exhibit 79, the purpose of the exhibit and its language.

At oral argument on objections to the Master's draft report, New Mexico pointed out that there must be, but was not, evidence in the record to support the Master's inference from Texas Exhibit 79. The Master stated that he would be on "safe ground" if it had been testified that Texas Exhibit 79 accounted for all natural flows and that anything not accounted for was man-made departures. Tr. at 60 (April 16, 1986).

The Master's interpretation of Texas Exhibit 79 was apparently as much of a surprise to Texas as New Mexico. In the subsequent hearing on remedies, Robert Whinton, the Texas Interstate Compact Coordinator and engineering advisor to the Texas commissioner on the Pecos River Commission, testified that Exhibit 79 did not account for depletions due to man's activities or for every natural depletion in the river. Tr. at

247-53, (May 20, 1986); *see also* Tr. at 282-83, 305 (May 21, 1986). The next day, Mr. Whintenton testified again. This time, after additional exchanges between the witness, counsel and the Master, Mr. Whintenton agreed with the Master that it was "more likely than not" that the negative departures reflected in Texas Exhibit 79 were due to man's activities. *Id.* at 290-92. He asserted, however, that Texas was ready and willing to present evidence to show that all departures were caused by man's activities. *Id.* at 306-07.

After hearing Mr. Whintenton's testimony on the first day, the Master asked Texas to put on another witness to address the issue. Tr. at 252, 254-55 (May 20, 1986). Texas offered Dr. V.R. Krishna Murthy, who testified that Texas exercised its "best efforts" to account for all natural losses in the stream system and that all "known" natural losses were accounted for in Texas Exhibit 79. Tr. at 318, 319 (May 21, 1986). Dr. Murthy also agreed with the Master that, as a "logical proposition," additional losses are "more likely than not" due to man's activities. *Id.* at 320. The theory that Texas Exhibit 79 addresses causes of departures was plainly an afterthought prompted by the Master's draft report.

New Mexico's expert witness was Carl Slingerland, a 25-year member of the Commission's engineering advisory committee. He testified that Texas Exhibit 79 merely computed indicated departures, and, although some items used to compute departures reflected reductions not due to man's activities, the exhibit did not identify causes of departures. *Id.* at 340-43. When asked whether it was more likely than not that negative departures were caused by man's activities, he said he would expect part of them were due to man's activities and part were not. *Id.* at 345. He estimated that probably 15 to 20 percent of the stateline flow was lost due to causes other than man's activities. *Id.* at 343.

The Master, therefore, was in error in assuming that Texas Exhibit 79 addresses causes and accounts for all non-manmade depletions. The Master further erred in assuming that, if Exhibit 79 accounted for all non-manmade depletions, all remaining departures must be due to man's activities.

In addition to man-made causes and known natural causes of depletion, the Pecos River has suffered losses from indeterminate causes. There had been, for example, two substantial declines in the discharge of water from Carlsbad Springs to the Pecos River. The first occurred in 1933 and the engineering advisors to the Pecos River Commission were never able to determine the cause. The second occurred in 1957. Stip. Exhibit 8, Review of Basic Data, figure 15-1. Only 16,000 acre-feet per year of the reduction in discharge from Carlsbad Springs could be attributed to man's activities in New Mexico. Texas Exhibit 19, "Geohydrology of Major Johnson Springs and Carlsbad Springs," figure 10, (1978). As to the remaining 15,000 acre-feet per year decline in discharge, the Master determined that none of this depletion could be attributed to pumping in Texas. 1986 Report at 29. There was no evidence that this departure could be attributed to man's activities in New Mexico.

At the 1961 and 1962 meetings of the Commission, Royce Tipton emphasized to the Commission that there had been a sudden break from a trend of accumulated positive departures in 1957 and said that the engineering advisory committee should address its attention to the cause of that departure. Stip. Exhibit 4(b) at 247 (Commission minutes of January 31, 1962); Stip. Exhibit 7, Tr. at 60 (Commission meeting of November 9, 1962). No activity of man in New Mexico, not dramatically evident, could have caused such a substantial decline in the discharge of Carlsbad Springs. This departure has never been explained and therefore cannot be ascribed to man's activities in New Mexico.

The Master took no account of the indeterminate causes. Yet historic evidence of unknowns makes it clear that a reach-by-reach investigation of the river and independent determination of causes, as contemplated by the Compact negotiators, is needed before New Mexico may be fairly charged for depletions. Neither the hearings in November and December 1985 nor the May 1986 hearing on relief provided a basis for or bolstered the Master's erroneous double assumptions about Texas Exhibit 79.

C. Texas bears the burden of proving that departures are due to man's activities in New Mexico.

New Mexico is entitled to an evidentiary hearing on man's activities, in which Texas bears the burden of proving that departures are caused by man's activities in New Mexico. As early as 1977, Special Master Breitenstein had decided:

So far as depletion by the activities of man are concerned, it is my opinion that the burden is on the State of Texas to show that the depletion, departures, whatever you want to call them, have been by the activities of man.

I say that primarily because to hold otherwise would be to require New Mexico to prove a negative, and I long ago gave up the idea that a negative could ever be proven.

So it seems to me, and it is my ruling, that the burden is on Texas to show that the departures have been caused by the activities of man.

Tr. at 323 (June 28, 1977).

As the charging party, Texas bears the burden of coming forward with the evidence and proving her claims correct. Facts on this issue are available from public agencies such as the U.S. Geological Survey, Soil Conservation Service,

U.S. Department of Agriculture, Pecos River Commission and the New Mexico State Engineer Office. Much, if not all, the data has been provided to Texas pursuant to her requests.

There is no precedent for the man's activities hearing. Because of the nature of the public information available on the issue, however, that phase of the case may lend itself to a substantial number of stipulations, reducing contested issues. Following completion of this phase of the case, the Court will be in a position to determine the extent to which man's activities in New Mexico caused the departures. Until then, neither the Court nor the states can know the extent to which man's activities in New Mexico are causing departures from the 1947 condition flow at the state line.

II

RETROACTIVE RELIEF IS IMPROPER BECAUSE IT CONFLICTS WITH THE COMPACT AND IS INEQUITABLE IN THIS CASE

A. The compact commission rejected debit accounting and repayment on the Pecos River.

The Master has applied to the Pecos River Compact a debit-credit accounting approach which the Compact negotiators specifically rejected. The negotiators rejected an accounting system based on accumulated debits and credits because the Pecos River is difficult to manage, flows through a geologically complicated basin and is highly variable. *See Statement of the Case at 2-3.* The river does not lend itself to a regular accounting scheme and schedule; therefore, the Pecos River Compact does not provide for an annual accounting and repayment of accumulated shortages or credit for overdelivery.

The compact commissioners initially considered debit and credit accounting:

After the Pecos River Compact Commission by negotiation agrees on the particular condition which should be controlling as between the two States, that condition can be defined for purposes of administration by setting up in the compact *schedules* based upon relations between certain water supply indexes and the state line flows A method of annual accounting which will permit *credits and debits* to accumulate within certain prescribed limits will be practicable. This will permit flexible operation and the maximum use possible of the waters of the stream with existing facilities. If a credit and debit system is not established which will permit storage of water in upstream reservoirs in the maximum amount possible, within the prescribed limits, wastes of water from the basin at times will result from spill at the lowest reservoir, which in this case is the Red Bluff Reservoir.

Synopsis of Engineering Advisory Committee's January 14, 1948 Report in S. Doc. 109 at xxxiv (emphasis added).

The compact negotiators rejected the approach as unwise, for reasons explained by Mr. Tipton:

[I]t would have been very unwise for the commission to have set out in this compact what might be called a *schedule*. It would have been unwise for several reasons. The commission may devise, as time goes on, a better means to determine this than by the inflow-outflow method. It may perfect more nearly the curves which appear in the engineering advisory committee report. We are having difficulty now in regard to one compact [the Rio Grande Compact] which involves three States, one of them being the State of Texas, where we are trying to change

the schedule without changing rights and obligations. It appears that we will have to go to the legislature to change the schedule. The way the Pecos compact is written, the commission has full authority to change the method, or to perfect the technique, so long as what is done by the commission is something directed at the *determination of the obligation* under [Article III] (a).

Id. at 117 (emphasis added).

The problem, again, was the difficulty of correctly analyzing the Pecos River. Because of that difficulty the compact negotiators provided for even greater flexibility and tolerance than a schedule and debit-credit account would allow. They viewed the compact as operating not by an accounting of debits, a deduction for credits, and repayment, but rather by the correction of conditions when departures due to man's activities were found:

The question has been asked, Supposing there is noncompliance on the part of either State with the provisions of the compact? What is the procedure under the terms of this draft? I interpret the draft that the commission in making its findings, which it is obligated to make, would find that that State was not complying with the terms of the compact and would report that fact to the State. That State, *then*, under the terms of the compact, is *obligated to correct* that condition. And in correcting that condition, if it requires the curtailment of the use of any water in New Mexico, under article IX the curtailment shall be made in order of priority so far as New Mexico is concerned.

Id. at 124 (emphasis added).

The negotiating commissioners decided not to adopt delivery schedules and an accounting system for the accrual of debits or credits as was done in the Rio Grande Compact, to which Mr. Tipton alluded in his explanation of Article III(a). The Rio Grande Compact, 53 Stat. 785 (1939), requires the computation of debits and credits of Colorado and New Mexico each calendar year by reference to delivery schedules. That system works because the Rio Grande Compact makes upstream states strictly liable for delivery deficits irrespective of the cause of those deficits. Thus, a relatively simple accounting is possible. In contrast, the Pecos River Compact negotiators wanted to guarantee that New Mexico would be liable only for increased depletions due to man's activities. They were well aware of the erratic nature of the river, and knew that a simple debit-credit accounting system would be unreliable.

The Inflow-Outflow Manual, adopted by the compact commission in December 1948, makes it even clearer that the administration of the Compact requires the Pecos River Commission to examine the establishment of trends in lieu of an annual accrual of debits and credits based upon a schedule.

The curve established by the points represents a mean of that [the 1947] condition for the historical range of streamflow. As records are accumulated, there may be departures by single points or a series of points on one or the other side of the curve. The departures may accumulate in one direction for a number of years and then shift to the other direction. A *trend* away from the mean condition is not well established until the departures accumulate to a degree which the basic data indicates is excessive, or until the accumulation in one direction is persistent for a period of time. On the other hand, an immediate change in inflow-outflow relationship

will be indicated when works which affect the depletion are constructed above the outflow point.

S. Doc. 109 at 151-52 (emphasis added).

The Manual also suggests that any three-year period which "departs materially" from the 1947 condition correlation curve should be "scrutinized carefully" in order to determine whether it should be eliminated in calculating accumulated differences from the curve. *Id.* at 156.

The compact commission's wisdom has been borne out by the hydrologic data gathered since 1948. The departures listed in column 6 of Table 2 in Texas Exhibit 79, a copy of which is reproduced in the appendix to this brief at C-1, illustrate the impracticability of precise schedules and accounting of debits and credits under a variable river like the Pecos. From 1952 to 1953 there was a negative change in the departures of 16,000 acre-feet; from 1965 to 1966, a positive change in the departures of 33,500 acre-feet; from 1968 to 1969, a negative change in departures of 35,800 acre-feet. Special Master Breitenstein specifically noted the wide ranges of departures listed in the 1948 Engineering Report in the second table on page 155 of S. Doc. 109. October 3, 1977 Special Master Report (1977 Report) at 21.

While Table 2 in Texas Exhibit 79 does not indicate whether these dramatic swings in stateline flows are due to man's activities, it is obvious that drastic changes between the averages of three-year periods could not be caused by new man-made depletions without the construction of major works. No major works were built in these periods. Therefore, those changes must be ascribed to variations in the source of flood inflow, the operation of the storage reservoirs that were part of the 1947 condition, changes in groundwater accretions resulting from significant variations in the amount and location of precipitation, or possible errors in the 1947 condition base relationship. 1979 Report at 15, 38; Tr. at 343-44 (May 21, 1986).

For these reasons, specific annual debits or credits should not be used to determine compact compliance. A trend must first be established to indicate departures and then findings made as to the causes of those departures. To the extent that departures are due to man's activities in New Mexico, the Compact remedy is for New Mexico to make corrections to adjust the deliveries to the state line.

The Master rejects the Compact remedy because he erroneously concludes that ensuring future adjustments is insufficient and that the Compact would be an "illusory contract" without the "meaningful remedy" of retroactive relief. 1986 Report at 41. To the contrary, the remedy contemplated by the Compact is diligent compliance with the Compact provision to maintain the flow of the river to deliver water to Texas in accordance with the 1947 condition. S. Doc. 109 at 151-56. If stateline flows are insufficient and any deficiencies are due to man's activities in New Mexico, New Mexico must curtail her depletions to allow the proper flow at the state line.

This relief is quite meaningful. As the proceedings below indicated, if the Master is correct and New Mexico is responsible for an average annual negative departure of 10,000 acre-feet from 1950 through 1983, then New Mexico would have to permanently terminate irrigation of approximately 14,000 acres to meet New Mexico's delivery obligation under Articles III(a) and IX. 1986 Report at 36; New Mexico Exhibit 136 at 7-8. Termination of this amount of irrigation is significant both to New Mexico and to Texas, for it should assure Texas of the flow to which she is entitled under the 1947 condition. The relief contemplated under the Compact is, thus, real, measurable and substantial, and should govern the provision for relief in this suit to enforce the Compact.

Moreover, there is no express covenant in the Pecos River Compact that requires the payment of accumulated negative

debits in stateline deliveries. Out of 23 interstate water apportionment compacts listed in the Council of State Governments report entitled *Interstate Compacts and Agencies* at 25-29 (1979), only two expressly require payment of past under-deliveries and two expressly prohibit such payment. Rio Grande Compact, Article VI, 53 Stat. 785 (1939) ("All debits and credits of Colorado and New Mexico shall be computed for each calendar year"); Upper Colorado River Compact, Article IV(b), 63 Stat. 31 (1949). Two expressly prohibit such payment with this phrase "There shall be no allowance or accumulation of credits or debits for or against either state." Arkansas River Compact, Article V(E)(5), 63 Stat. 145 (1949); Sabine River Compact, Article V(i), 65 Stat. 736 (1951). The remaining compacts do not address this question. As a matter of wise judicial policy the Court should not conclude as a matter of law that all compacts that do not expressly provide for the obligation to pay past shortfalls implicitly impose such an obligation. Implied covenants are also not favored in the law. An obligation may be implied when no other interpretation is reasonable, but the party who asserts the existence of an implied covenant bears a heavy burden. *Colorado Coal Furnace-Distributors, Inc. v. Prill Mfg. Co.*, 605 F.2d 499, 504 (10th Cir. 1979).

B. Retroactive relief is inequitable in this case.

Not only is retroactive relief unauthorized by the Compact, the relief the Master recommends is inequitable under the facts in this case. First, it penalizes New Mexico when, to the best of her knowledge and ability, she complied with the 1947 condition. In the 1930s and 1940s, New Mexico took several steps to declare groundwater basins, restrict uses and otherwise relieve the strain on the Pecos River. 462 U.S. at 558 n.3; Dunbar, "Pioneering Groundwater Legislation" 47 *Pacific Hist. Rev.* 565 (1978) (in the Roswell Basin New Mexicans

“originated in the third and fourth decades of this century groundwater-control institutions which have served as models for most of the western states”). In the 1950s New Mexico closely administered the Pecos River. Tr. at 25-27, 42-44, 49-50, 53-54 (May 20, 1986). According to the Commission’s findings in 1961 and 1962, New Mexico was meeting her obligation. When Texas filed suit, New Mexico was on notice that Texas disagreed, but the State Engineer had no basis on which to reduce uses in New Mexico in the absence of a Commission finding of underdeliveries attributable to depletions by man’s activities. *Id.* at 55. As both special masters in this case have recognized, New Mexico has acted in good faith in the administration of the Compact and has cooperated patiently with this trying and extended litigation. 1982 Report at 5, 18; 1986 Report at 3, 41. Had the appropriate officials of New Mexico been given notice by the Commission of departures caused by man-made depletions in New Mexico even as late as 1962, it would have been a simple matter to correct the condition leading to those negative departures by curtailing use on a relatively few acres under junior rights as mandated by Article IX of the Compact.

Second, retroactive relief is inequitable in this case because it would hold New Mexico to responsibility in the past for underdeliveries that had never been determined. The 1947 condition was not finally defined by the Court until 1984. 1982 Report at 18 (“the obligation is still uncertain”); 1984 Report, *adopted*, 467 U.S. 1238. The departures from that condition are being defined now. In New Mexico’s view, the extent to which those departures are due to man’s activities has yet to be defined. There is no basis for retroactive relief.

In *Wyoming v. Colorado*, 309 U.S. 572 (1940), Wyoming filed a petition asking the Court to find Colorado in contempt of a 1936 Decree, 298 U.S. 573, which equitably apportioned the waters of the Laramie River. The petition requested the

Court to impose on Colorado a fine sufficient in amount to reimburse Wyoming and her water appropriators for injuries sustained by the violation of the decree. Petition for Rule to Show Cause at 12 (July 19, 1939). Wyoming claimed that Colorado had permitted the excess diversion of over 12,000 acre-feet in the previous year. *Id.* at 573. The Court denied Wyoming's petition on the grounds that "there was a period of uncertainty and room for misunderstanding which may be considered in extenuation" and that "in the future there will be no grounds for any possible misapprehension." *Id.* at 582. The same uncertainty has existed in this case.

Moreover, retroactive relief for the past 34 years is inequitable because New Mexico did not cause the extended delay in resolution of the Compact obligations. Texas waited 26 years before raising her claim and spent another ten years in unsuccessful efforts to alter the methodology for determining the 1947 condition. Under the circumstances it is inequitable and inappropriate to ask New Mexico to bear the heavy burden of a 34-year water judgment.

III

**EVEN IF RETROACTIVE RELIEF WERE
PERMISSIBLE, THE TERMS OF THE RELIEF
RECOMMENDED BY THE MASTER ARE
IMPROPER AND SHOULD BE REMANDED
FOR RECONSIDERATION**

New Mexico has both general and specific objections to the terms of the recommended relief. The specific objections are to the recommendations that:

- (1) New Mexico has only ten years in which to satisfy the judgment on 34 years of water delivery; and

- (2) New Mexico be charged an annual "water interest" if she does not meet the delivery terms.

New Mexico's general objections are:

- (1) in fashioning the terms of the retroactive relief, the Master failed to balance the equities; and
- (2) the Master unnecessarily excluded options such as monetary payment in lieu of water deliveries as retroactive relief.

A. The Master fashioned equitable relief without balancing the equities.

The Master's recommendations on relief are undermined by the same sort of procedural flaws as those relating to the man's activities finding. Because of the procedural inadequacies, the Master's recommendations lack the solid foundation needed to support them. The Master denied himself the benefit of a considered approach and reached an ill-considered recommendation.

The Master's draft report proposed terms for relief long before the states knew the question of relief was before the Court. They had never proposed appropriate relief. They had not addressed fundamental legal questions, such as the appropriate methods of relief and whether retroactive relief was available or whether monetary relief was available. They had never presented testimony on the consequences of alternative forms of relief. They had just completed an evidentiary hearing on calculating departures; the next logical steps would be determining depletions by man's activities and the appropriate relief, if any.

Instead, the Master plunged into the issue with his draft report. Although he granted New Mexico's request for a hearing

on relief, under the circumstances the hearing did not lead to a balanced consideration of the issues. April 18, 1986 Order. New Mexico presented her evidence of harm through engineers and an economist, but Texas provided only the anecdotal testimony of one witness on the benefits to Texas. In the end, the Master did not have information by which to balance relative harm and benefit to fashion terms for relief.

Even if the question of New Mexico's obligation to provide relief were clear, the Master should have balanced the equities in setting the terms of relief. The Court has always treaded carefully when adjusting interstate interests in water, befitting the high dignity of the interests involved. *Kansas v. Colorado*, 206 U.S. 46, 99-102 (1907). The Court has approached its responsibilities in water allocation with a high degree of caution and respect for the consequences of its actions. In the "delicate adjustment of interests" on an interstate stream, the Court weighs carefully "the damage to upstream areas as compared to the benefits to downstream areas." *Nebraska v. Wyoming*, 325 U.S. 589, 618 (1945). In *Colorado v. Kansas*, 320 U.S. 383, 393 (1943), the Court was "conscious of the great and serious caution" with which it should approach the case and that "all the factors which create equities in favor of one state or the other must be weighed." Because the Master's recommended decree would "inflict serious damage on existing agricultural interests" in Colorado and Kansas had taken no action for 21 years, Kansas bore an unusually heavy burden which was not sustained. *Id.* at 394.

Where the Master has not developed an adequate record to weigh the equities, the Court has remanded the case. In *Colorado v. New Mexico*, 459 U.S. 176 (1982), the Court remanded the case to the Master to make specific findings so that the Court could determine whether "the benefits to the State seeking the diversion substantially outweigh the harm to existing uses in another State." *Id.* at 190.

Although these cases cited above involved equitable apportionment, they are equally applicable here. First, this Court has recognized that its "equitable power to apportion interstate streams and the power of the States and Congress acting in concert to accomplish the same result are to a large extent complementary." 462 U.S. at 569; *see also* 1982 Report at 19. Second, this case is somewhat similar to an equitable apportionment suit because the definition of the 1947 condition was in dispute from 1970 until 1984. Third, the underlying concern for and caution to be used in shutting down valid, existing water uses is a universal value in water law and applies to the fashioning of long-term relief as well as original allocation. *Nebraska v. Wyoming*, 325 U.S. at 622; *Arizona v. California*, 373 U.S. 546, 555-56 (1963); *Colorado v. New Mexico*, 459 U.S. at 186.

Here the Master did not approach his responsibilities with the caution warranted by the consequences and he did not develop a record from which the Court may weigh the equities. The record developed in this case presents no concrete evidence on the way in which and extent to which Texas will benefit from the proposed terms of relief. The harm to New Mexico cannot be and has not been weighed against the benefits to Texas. The evidence is insufficient because the record on this issue was made in reaction to the Master's draft report, rather than through an orderly consideration of the issue of appropriate relief. Consequently, the recommended relief is flawed.

B. Requiring satisfaction of a 34-year judgment in ten years would be inequitable.

Because the Master failed to balance the harm to New Mexico against the benefit to Texas in fashioning terms of relief, the Master improperly recommends New Mexico be limited to a ten-year period in which to satisfy the recommended judgment. The Master first arrived at this ten-year time frame on the basis

of his generalized understandings and presumptions, not on a weighing and consideration of evidence.

The Master first proposed in his draft report that New Mexico satisfy in ten years the 34-year judgment. He based this scheme on a generalized notion of balancing the "damage to New Mexico's Pecos Basin economy against Texas' legal right to water — the lack of which has presumably inhibited the development of a Texas Pecos Basin economy" Draft Report at 30. He reached this understanding without the benefit of evidence on past injuries or future harms and benefits resulting from any particular scheme for retroactive relief.

In response, New Mexico argued for and received an opportunity to present evidence of economic impacts expected from the recommendation. Tr. at 93 (April 16, 1986). Hearing was set for the next month. April 18, 1986 Order. The Order provided that New Mexico limit her evidence to four specific delivery schedules and that Texas "may" rebut New Mexico's case and offer evidence of economic impacts to Texas of the delivery schedules. *Id.* at 2. Presumably, this evidence would assist the Master in tailoring relief in accordance with equitable principles. This, however, was not to be the case.

Despite a severely abbreviated discovery and hearing schedule, New Mexico offered specific evidence addressing each one of the Master's proposed schedules. New Mexico's hydrologic studies showed the effects upon river flow of retiring certain irrigated areas in the Pecos River basin. New Mexico Exhibits 128, 133, 134; testimony of John Couzens and Deborah Hathaway, Tr. at 114-31, 138-69 (May 20, 1986). Those studies showed it would be impossible to satisfy the judgment in ten years by retiring the 112,800 acres in the Roswell Basin with junior water rights. Even if all lands in the Roswell Basin were retired immediately, the full effects will not reach the river within the Master's time frame. With a delivery rate of 30,000

acre-feet per year for 20 years, rather than ten years, the direct impact could reach \$117,866,700 in 1986 dollars. New Mexico Exhibit 136 at 15. The indirect costs, i.e., the decline in agriculturally related industries, loss of employment, impact on regional businesses, would be approximately \$163,017,000. *Id.* at 31. This evaluation of the costs to New Mexico cannot, of course, be directly compared to the costs which would be incurred under the Master's more abbreviated delivery schedule, but the costs under the recommended decree would be obviously substantial.

Texas, on the other hand, presented virtually no hard data on the expected benefits from water deliveries under a ten-year or any other time frame, nor did she produce data on the economic consequences of past shortfalls in the Pecos River basin in Texas. Instead, Texas relied upon anecdotal testimony on the history of irrigation in the area. Testimony of Theresa Walker, Tr. at 385-406 (May 21, 1986).

There were only two areas of testimony which provide any assistance in examining the effect of the proposed relief on Texas; both require assumptions not in evidence. First, the Texas witness testified that it would take, at the farm headgate, approximately seven acre-feet per acre to grow alfalfa and about five acre-feet per acre for cotton. Tr. at 409-10 (May 21, 1986). From this information, one may reasonably assume that, after channel and distribution losses, a stateline delivery of nine acre-feet per acre is necessary to deliver five to seven acre-feet per acre at the farm headgates in Texas. In that case, the 34,010 acre-feet per year under a ten-year schedule could serve only about 3,800 acres for ten years while terminating irrigation of 112,800 acres in New Mexico. Second, Dr. Snyder testified that the value of water ranges from \$10 to \$25 per acre-foot. Tr. at 201 (May 20, 1986). One could assume, then, a total direct benefit of this water to Texas of, at most, \$8,502,500. Assuming that 112,800 acres with a duty of three acre-feet

per acre would be out of service in New Mexico for ten years, the direct cost to New Mexico would be \$84,600,000. There is nothing in the record to indicate that the Master performed these calculations and balanced the equities.

The Master's Report essentially repeats his earlier recommendation, although he grants New Mexico a three-year grace period in which to begin delivering water. 1986 Report at 36. The Master may well have weighed the generalized harm suffered by Texas against specific damage New Mexico will suffer in the future, but it is unclear from the record below how he could have done so.

What the Master has done is propose unrealistic solutions which he apparently believes might diminish New Mexico's enormous financial and administrative burden in curtailing uses in the Roswell Basin. There is no basis in the record for any of these proposals. In seeming response to Texas' suggestions during cross-examination of S.E. Reynolds, the New Mexico State Engineer, the Master suggests that New Mexico purchase or condemn groundwater rights, pump the water, and pipe it directly to the river. Tr. at 56-59 (May 20, 1986); 1986 Report at 34-35. This "solution" ignores the potential expense, litigation and time that would be involved.

The Master also suggests that New Mexico could condemn and retire the senior surface water rights in the Carlsbad Irrigation District on a temporary basis, or "rent" the water. 1986 Report at 35. The "solution" may be facially attractive, but, again, is without foundation in the record or reality. For example, the Carlsbad Irrigation District is a federal reclamation project with legal title to the water rights claimed by the Bureau of Reclamation. Further, irrigators in the district could not be expected to "rent" their water to the state for a number of years and stay in business. New Mexico Exhibit 136 at 1. The remaining irrigators would unfairly bear the

annual operation and maintenance costs for the entire district's facilities.

It is apparent from the lack of data and evidence below that these options were suggested by the Master without the careful consideration necessary to determine whether these solutions are realistic, workable alternatives.

C. There is no basis for water interest.

The Master, having recommended an inordinately severe delivery schedule, makes the relief even more harsh by recommending that New Mexico pay water interest to Texas each year on the balance of water owed, but not delivered. No statute authorizes interest on judgments in original actions in this Court; common law judgments do not bear interest. *Pierce v. United States*, 255 U.S. 398, 406 (1921). Neither do the express terms of the Pecos River Compact, a contract, authorize water interest. See *Virginia v. West Virginia*, 238 U.S. 202 (1915).

The Master recommends imposing water interest as an "incentive to fulfill the terms of the decree." 1986 Report at 38. Setting aside the offense to New Mexico and her past record of cooperation and good faith, the Master's recommended relief is plainly wrong as a matter of law.

D. New Mexico should have the option of monetary damages.

While the Master felt it quite possible that both Texas and New Mexico would be better off with a monetary solution than with payment in kind, he did not feel free to recommend that the Court impose a monetary solution for the reason that there is "no explicit basis" for such a remedy in the Compact. On the other hand, he recommends retroactive relief by the

delivery of water to pay past shortfalls despite the absence of any explicit basis for such a remedy in the Compact.

The Master recognized that the delivery of water to pay past shortfalls may pose a "serious problem" to New Mexico, and that both Texas and New Mexico could be "better off with a monetary solution." Tr. at 94 (April 16, 1986); 1986 Report at 31. "The real way to take care of it . . . is for New Mexico to pay Texas some money and Texas ought to take something considerably less than what the value is to New Mexico because Texas is going to get less water [than New Mexico would have to give up]." Tr. at 200 (May 20, 1986). Notwithstanding these concerns, however, he rejected damages because he could find no authority in the Compact for awarding such relief.

If the Court finds that man's activities caused the departures, that the Compact requires the delivery of accumulated departures, and retroactive relief is appropriate under the circumstances of this case, then the Court should allow New Mexico the option of paying monetary damages in lieu of specific performance. The gravity of the potential consequences to New Mexico's economy requires no less. New Mexico stipulated that, hypothetically, the Court has authority to offer as an alternative the payment of monetary damages. Tr. at 94 (April 16, 1986). However, this offer should not be construed, as apparently the Master does, as a concession that the Compact authorizes retroactive relief. 1986 Report at 40 n.18 (citation in footnote should be to the April 16, not May 16, 1986 transcript). Because the Master did not hear evidence earlier on monetary relief, a hearing and determination of the nature and extent of damages would be needed on remand; if damages provide an adequate remedy, specific performance should not be required.

CONCLUSION

The Court should reject the Master's recommendation of retroactive relief. The Court should return this case to the Master to determine whether man's activities depleted the flows of the Pecos River at the state line. Alternatively, if the Court holds that retroactive relief is required under the Compact and appropriate in this case, and finds that man's activities caused depletions in stateline flows, the Court should instruct the Master to balance the equities and determine the monetary damages that might be paid by New Mexico in lieu of water delivery.

Respectfully submitted,

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APPENDIX A

OBJECTIONS TO PROPOSED DECREE

New Mexico objects to the Master's proposed decree as contrary to the Pecos River Compact, internally inconsistent, inconsistent with the Master's findings and unworkable in administration.

1. Articles II(A) and II(B) of the proposed decree in effect amend the Compact by depriving the Pecos River Commission of its discretionary powers under Articles VI(a), VI(b) and VI(c) of the Compact. Because channel losses in the various reaches of the Pecos River are continually changing, the channel loss equations in Texas Exhibit 79 must be subject to change in order to correctly compute flood inflows. More importantly, because contemplated administrative procedures may be found technically infeasible, the Commission must be free to devise and adopt "a more feasible method" of river accounting. These articles in the Master's proposed decree would not allow the Commission to exercise authority expressly delegated to it by the Compact. The proposed decree would impermissibly rewrite the Pecos River Compact. *Texas v. New Mexico*, 462 U.S. 554, 565 (1983).

2. Article V of the proposed decree suggests the appointment of an arbiter. This too would be an impermissible amendment to the Compact. *Id.* at 565-66.

3. Article II of the proposed decree does not provide for a complete accounting of departures. Neither Texas Exhibit 68 nor Texas Exhibit 79 includes those adjustments which must be made to the computations of departures, i.e., adjustments for McMillan Dike, Malaga Bend, and the upper reach of the river. Texas Exhibit 79 does not provide any procedures for determining whether negative departures at the state line are

due to man's activities in New Mexico. The proposed decree at footnote 1, however, recognizes that Texas Exhibit 79 will have to be modified in order to reflect man-made depletions chargeable to New Mexico.

4. Articles II(A) and II(B) of the proposed decree would enjoin the State of New Mexico:

(A) To comply with the Article III(a) obligation of the Pecos River Compact by delivering to Texas at state line *each year* an amount of water calculated in accordance with the inflow-outflow equation contained in Tex. Exh. 68 at page 2. (Emphasis added.)

and

(B) To calculate the Index Inflow component of the inflow-outflow equation by using the inflow-outflow and channel loss equations contained in Tex. Exh. 79.

The inflow-outflow equation contained in Texas Exhibit 68 at 2 does not, by itself, determine New Mexico's Article III(a) delivery obligation. Other computations must be made to determine the delivery obligation. In addition to the adjustments discussed in paragraph 2 above, the variations in delivery at the state line due to such factors as the location of flood inflows, reservoir operation, and precipitation should be taken into account. For example, S. Doc. 109 at 155, second table on page, and Texas Exhibit 79, table 2, show that wide departures, both positive and negative, will occur. Those departures result from the operation of conservation storage reservoirs in New Mexico, as they existed under the 1947 condition, and the erratic hydrologic nature of the Pecos River basin. 1982 Report at 6. Flood inflows constitute more than half of the annual index inflow to the river. 1984 Report at 4. In those years in

which the flood inflows occur predominantly below the conservation storage reservoirs in New Mexico, positive departures from the inflow-outflow relationship must be expected. Conversely, when the flood inflows occur predominantly above those reservoirs, negative departures must be expected. See Master's Exhibit 27 at 46. Furthermore, periods of relatively abundant or deficient rainfall affect the springs discharging to the river and will cause, a year or several years later, positive or negative departures from the inflow-outflow relationship. Departures caused by reservoir operation, location of flood flow, or variations in precipitation are not chargeable as depletions due to man's activities in New Mexico under the Compact, but they would be so charged under these articles.

Requiring New Mexico to meet her Article III(a) Compact obligation *each year* would result in operating the 1947 condition reservoirs in an extremely inefficient manner and diminishing water use to well below what she is entitled to under the 1947 condition. The reservoir operation required could result in waste of the limited water supply of the Pecos River basin.

The Master relies upon the accrual of debits and credits as the basis for New Mexico's past obligations but does not provide for credits for positive departures from the 1947 condition in the future. Given the erratic nature of the river, and the variations discussed above, New Mexico cannot escape substantially exceeding the "annual minimum delivery obligation," yet would receive no credit for doing so. If the Pecos River Compact is to be interpreted as allowing accrual of debits, provision must be made for credit accounting as well.

5. Article II(C) of the proposed decree requires both a delivery of additional water "aggregating" 340,100 acre-feet over a period of ten years *and* a delivery of "not less than"

34,010 acre-feet per year for ten years. These requirements penalize New Mexico because no credits are allowed for over-deliveries during the ten-year delivery schedule under this article.

6. Article IV of the proposed decree requires water interest on the balance of any amount owed under "Section II(b)" of the proposed decree. Article or Section II(b) merely relates to the computation of the index inflows, and not to New Mexico's obligation under the Compact. This provision in the article is unclear.

APPENDIX B

PECOS RIVER COMPACT

The State of New Mexico and the State of Texas, acting through their Commissioners,

John H. Bliss for the State of New Mexico and
Charles H. Miller for the State of Texas,

after negotiations participated in by Berkeley Johnson, appointed by the President as the representative of the United States of America, have agreed respecting the uses, apportionment and deliveries of the water of the Pecos River as follows:

ARTICLE I

The major purposes of this Compact are to provide for the equitable division and apportionment of the use of the waters of the Pecos River; to promote interstate comity; to remove causes of present and future controversies; to make secure and protect present development within the states; to facilitate the construction of works for, (a) the salvage of water, (b) the more efficient use of water, and (c) the protection life and property from floods.

ARTICLE II

As used in this Compact:

(a) The term "Pecos River" means the tributary of the Rio Grande which rises in north-central New Mexico and flows in a southerly direction through New Mexico and Texas and joins the Rio Grande near the town of Langtry, Texas, and includes all tributaries of said Pecos River.

(b) The term "Pecos River Basin" means all of the contributing drainage area of the Pecos River and its tributaries above its mouth near Langtry, Texas.

(c) "New Mexico" and "Texas" means the State of New Mexico and the State of Texas, respectively; "United States" means the United States of America.

(d) The term "Commission" means the agency created by this Compact for the administration thereof.

(e) The term "deplete by man's activities" means to diminish the stream flow of the Pecos River at any given point as a result of beneficial consumptive uses of water within the Pecos River Basin above such point. For the purposes of this Compact it does not include the diminution of such flow by encroachment of salt cedars or other like growth, or by deterioration of the channel of the stream.

(f) The term "Report of the Engineering Advisory Committee" means that certain report of the Engineering Advisory Committee dated January, 1948, and all appendices thereto; including, basic data, processes, and analyses utilized in preparing that report, all of which were reviewed, approved, and adopted by the Commissioners signing this Compact at a meeting held in Santa Fe, New Mexico, on December 3, 1948, and which are included in the Minutes of that meeting.

(g) The term "1947 condition" means that situation in the Pecos River Basin as described and defined in the Report of the Engineering Advisory Committee. In determining any question of fact hereafter arising as to such situation, reference shall be made to, and decisions shall be based on, such report.

(h) The term "water salvaged" means that quantity of water which may be recovered and made available for beneficial use and which quantity of water under the 1947 condition was non-beneficially consumed by natural processes.

(i) The term "unappropriated flood waters" means water originating in the Pecos River Basin above Red Bluff Dam in Texas, the impoundment of which will not deplete the water usable by the storage and diversion facilities existing in either state under the 1947 condition and which if not impounded will flow past Girvin, Texas.

ARTICLE III

(a) Except as stated in paragraph (f) of this Article, New Mexico shall not deplete by man's activities the flow of the Pecos River at the New Mexico-Texas state line below an amount which will give to Texas a quantity of water equivalent to that available to Texas under the 1947 condition.

(b) Except as to the unappropriated flood waters thereof, the apportionment of which is included in and provided for by paragraph (f) of this Article, the beneficial consumptive use of the waters of the Delaware River is hereby apportioned to Texas, and the quantity of such beneficial consumptive use shall be included in determining waters received under the provisions of paragraph (a) of this Article.

(c) The beneficial consumptive use of water salvaged in New Mexico through the construction and operation of a project or projects by the United States or by joint undertakings of Texas and New Mexico, is hereby apportioned forty-three per cent (43%) to Texas and fifty-seven per cent (57%) to New Mexico.

(d) Except as to water salvaged, apportioned in paragraph (c) of this Article, the beneficial consumptive use of water which shall be non-beneficially consumed, and which is recovered, is hereby apportioned to New Mexico but not to have the effect of diminishing the quantity of water available to Texas under the 1947 condition.

(e) Any water salvaged in Texas is hereby apportioned to Texas.

(f) Beneficial consumptive use of unappropriated flood waters is hereby apportioned fifty per cent (50%) to Texas and fifty per cent (50%) to New Mexico.

ARTICLE IV

(a) New Mexico and Texas shall cooperate to support legislation for the authorization and construction of projects to eliminate non-beneficial consumption of water.

(b) New Mexico and Texas shall cooperate with agencies of the United States to devise and effectuate means of alleviating the salinity conditions of the Pecos River.

(c) New Mexico and Texas each may:

(i) Construct additional reservoir capacity to replace reservoir capacity made unusable by any cause.

(ii) Construct additional reservoir capacity for utilization of water salvaged and appropriated flood water apportioned by this Compact to such state.

(iii) Construct additional reservoir capacity for the purpose of making more efficient use of water apportioned by this Compact to such state.

(d) Neither New Mexico nor Texas will oppose the construction of any facilities permitted by this Compact, and New Mexico and Texas will cooperate to obtain the construction of facilities that will be of joint benefit to the two states.

(e) The Commission may determine the conditions under which Texas may store water in works constructed in and operated by New Mexico.

(f) No reservoir shall be constructed and operated in New Mexico above Avalon Dam for the sole benefit of Texas unless the Commission shall so determine.

(g) New Mexico and Texas each has the right to construct and operate works for the purpose of preventing flood damage.

(h) All facilities shall be operated in such manner as to carry out the terms of this Compact.

ARTICLE V

(a) There is hereby created an interstate administrative agency to be known as the "Pecos River Commission." The Commission shall be composed of one Commissioner representing each of the states of New Mexico and Texas, designated or appointed in accordance with the laws of each such state, and, if designated by the President, one Commissioner representing the United States. The President is hereby requested to designate such a Commissioner. If so designated, the Commissioner representing the United States shall be the presiding officer of the Commission, but shall not have the right to vote in any of the deliberations of the Commission. All members of the Commission must be present to constitute a quorum.

(b) The salaries and personal expenses of each Commissioner shall be paid by the government which he represents. All other expenses which are incurred by the Commission incident to the administration of this Compact and which are not paid by the United States shall be borne equally by the two states. On or before November 1 of each even numbered year the Commission shall adopt and transmit to the Governors of the two states and to the President a budget covering an estimate of its expenses for the following two years. The payment of the expenses of the Commission and of its employees shall not be subject to the audit and accounting procedures of either of the two states. However, all receipts and disbursements of funds handled by the Commission shall be audited yearly by a qualified independent public accountant and the report of the audit shall be included in, and become a part of, the annual report of the Commission.

(c) The Commission may appoint a secretary who, while so acting, shall not be an employee of either state. He shall serve for such term, receive such salary, and perform such duties as the Commission may direct. The Commission may employ such engineering, legal, clerical, and other personnel as in its judgment may be necessary for the performance of its functions under this Compact. In the hiring of employees the Commission shall not be bound by the civil service laws of either state.

(d) The Commission, so far as consistent with this Compact, shall have power to:

1. Adopt rules and regulations;
2. Locate, establish, construct, operate, maintain, and abandon water gaging stations, independently or in cooperation with appropriate governmental agencies;

3. Engage in studies of water supplies of the Pecos River and its tributaries, independently or in cooperation with appropriate governmental agencies;

4. Collect, analyze, correlate, preserve and report on data as to the stream flows, storage, diversions, salvage, and use of the waters of the Pecos River and its tributaries, independently or in cooperation with appropriate governmental agencies;

5. Make findings as to any change in depletion by man's activities in New Mexico, and on the Delaware River in Texas;

6. Make findings as to the deliveries of water at the New Mexico-Texas state line;

7. Make findings as to the quantities of water salvaged and the amount thereof delivered at the New Mexico-Texas state line;

8. Make findings as to quantities of water non-beneficially consumed in New Mexico;

9. Make findings as to quantities of unappropriated flood waters;

10. Make findings as to the quantities of reservoir losses from reservoirs constructed in New Mexico which may be used for the benefit of both states, and as to the share thereof charged under Article VI hereof to each of the states;

11. Acquire and hold such personal and real property as may be necessary for the performance of its duties hereunder and to dispose of the same when no longer required;

12. Perform all functions required of it by this Compact and do all things necessary, proper or convenient in the performance of its duties hereunder, independently or in cooperation with appropriate governmental agencies;

13. Make and transmit annually to the Governors of the signatory states and to the President of the United States on or before the last day of February of each year, a report covering the activities of the Commission for the preceding year.

(e) The Commission shall make available to the Governor of each of the signatory states any information within its possession at any time, and shall always provide free access to its records by the Governors of each of the States, or their representatives, or authorized representatives of the United States.

(f) Findings of fact made by the Commission shall not be conclusive in any court, or before any agency or tribunal, but shall constitute prima facie evidence of the facts found.

(g) The organization meeting of the Commission shall be held within four months from the effective date of this Compact.

ARTICLE VI

The following principles shall govern in regard to the apportionment made by Article III of this Compact:

(a) The report of the Engineering Advisory Committee, supplemented by additional data hereafter accumulated, shall be used by the Commission in making administrative determinations.

(b) Unless otherwise determined by the Commission, depletions by man's activities, state-line flows, quantities of

water salvaged, and quantities of unappropriated flood waters shall be determined on the basis of three-year periods reckoned in continuing progressive series beginning with the first day of January next succeeding the ratification of this Compact.

(c) Unless and until a more feasible method is devised and adopted by the Commission the inflow-outflow method, as described in the Report of the Engineering Advisory Committee, shall be used to:

(i) Determine the effect on the state-line flow of any change in depletions by man's activities or otherwise, of the waters of the Pecos River in New Mexico.

(ii) Measure at or near the Avalon Dam in New Mexico the quantities of water salvaged.

(iii) Measure at or near the state line any water released from storage for the benefit of Texas as provided for in subparagraph (d) of this Article.

(iv) Measure the quantities of unappropriated flood waters apportioned to Texas which have not been stored and regulated by reservoirs in New Mexico.

(v) Measure any other quantities of water required to be measured under the terms of this Compact which are susceptible of being measured by the inflow-outflow method.

(d) If unappropriated flood waters apportioned to Texas are stored in facilities constructed in New Mexico, the following principles shall apply:

(i) In case of spill from a reservoir constructed in and operated by New Mexico, the water stored to the credit of Texas will be considered as the first water to spill.

(ii) In case of spill from a reservoir jointly constructed and operated, the water stored to the credit of either state shall not be affected.

(iii) Reservoir losses shall be charged to each state in proportion to the quantity of water belonging to that State in storage at the time the losses occur.

(iv) The water impounded to the credit of Texas shall be released by New Mexico on the demand of Texas.

(e) Water salvaged shall be measured at or near the Avalon Dam in New Mexico and to the quantity thereof shall be added a quantity equal to the quantity of salvaged water depleted by man's activities above Avalon Dam. The quantity of water salvaged that is apportioned to Texas shall be delivered by New Mexico at the New Mexico-Texas state line. The quantity of unappropriated flood waters impounded under paragraph (d) of this Article, when released shall be delivered by New Mexico at the New Mexico-Texas state line in the quantity released less channel losses. The unappropriated flood waters apportioned to Texas by this Compact that are not impounded in reservoirs in New Mexico shall be measured and delivered at the New Mexico-Texas state line.

(f) Beneficial use shall be the basis, the measure, and the limit of the right to use water.

ARTICLE VII

In the event of importation of water by man's activities to the Pecos River Basin from any other river basin the state making the importation shall have the exclusive use of such imported water.

ARTICLE VIII

The provisions of this Compact shall not apply to, or interfere with, the right or power of either signatory state to regulate within its boundaries the appropriation, use and control of water, not inconsistent with its obligations under this Compact.

ARTICLE IX

In maintaining the flows at the New Mexico-Texas state line required by this Compact, New Mexico shall in all instances apply the principle of prior appropriation within New Mexico.

ARTICLE X

The failure of either state to use the water, or any part thereof, the use of which is apportioned to it under the terms of this Compact, shall not constitute a relinquishment of the right to such use, nor shall it constitute a forfeiture or abandonment of the right to such use.

ARTICLE XI

Nothing in this Compact shall be construed as:

(a) Affecting the obligations of the United States under the Treaty with the United Mexican States (Treaty Series 994);

(b) Affecting any rights or powers of the United States, its agencies or instrumentalities, in or to the waters of the Pecos River, or its capacity to acquire rights in and to the use of said waters;

(c) Subjecting any property of the United States, its agencies or instrumentalities, to taxation by any state or subdivision

thereof, or creating any obligation on the part of the United States, its agencies or instrumentalities, by reason of the acquisition, construction or operation of any property or works of whatever kind, to make any payment to any state or political subdivision thereof, state agency, municipality or entity whatsoever, in reimbursement for the loss of taxes;

(d) Subjecting any property of the United States, its agencies or instrumentalities, to the laws of any state to an extent other than the extent to which such laws would apply without regard to this Compact.

ARTICLE XII

The consumptive use of water by the United States or any of its agencies, instrumentalities or wards shall be charged as a use by the state in which the use is made; provided, that such consumptive use incident to the diversion, impounding, or conveyance of water in one state for use in the other state shall be charged to such latter state.

ARTICLE XIII

This Compact shall not be construed as establishing any general principle or precedent applicable to other interstate streams.

ARTICLE XIV

This Compact may be terminated at any time by appropriate action of the legislatures of both of the signatory states. In the event of such termination, all rights established under it shall continue unimpaired.

ARTICLE XV

This Compact shall become binding and obligatory when it shall have been ratified by the legislature of each State and approved by the Congress of the United States. Notice of ratification by the legislature of each State shall be given by the Governor of that State to the Governor of the other State and to the President of the United States, and the President is hereby requested to give notice to the Governor of each State of approval by the Congress of the United States.

IN WITNESS WHEREOF, the Commissioners have executed three counter-parts hereof each of which shall be and constitute an original, one of which shall be deposited in the archives of the Department of State of the United States, and one of which shall be forwarded to the Governor of each State.

Done at the City of Santa Fe, State of New Mexico, this 3rd day of December, 1948.

JOHN H. BLISS
Commissioner for the State of New
Mexico

CHARLES H. MILLER
Commissioner for the State of Texas

APPROVED

BERKELEY JOHNSON
Representative of the United States of
America

APPENDIX C

Table 2

PECOS RIVER COMPACT
SUMNER (ALAMOGORDO) DAM TO NEW MEXICO-TEXAS STATE LINE REACH
SUMMARY OF ANNUAL INFLOW-OUTFLOW COMPUTATIONS IN 1000 AC-FT UNITS
1950-1983

YEAR	ANNUAL FLOOD INFLOW (1)	INDEX INFLOW (2)	HISTORICAL OUTFLOW (3)	3-YEAR AVERAGE HISTORICAL OUTFLOW (4)	1947 CONDITION INDEX OUTFLOW (5)	DEPARTURE (6)	ACCUMULATED DEPARTURE (7)
1950	274.5		176.5				
1951	169.3		73.1				
1952	153.5	199.1	50.3	100.0	91.6	8.4	8.4
1953	124.4	149.1	36.0	53.1	50.7	-7.6	.8
1954	351.2	209.7	227.3	104.5	98.7	5.8	-6.6
1955	321.4	265.7	146.7	136.7	38.2	-1.5	5.1
1956	145.1	272.6	36.6	136.9	143.3	-6.4	-1.3
1957	145.3	204.0	48.6	77.3	94.9	-17.6	-18.9
1958	334.8	208.4	148.6	77.9	97.8	-19.9	-38.8
1959	160.5	213.5	54.4	83.9	101.2	-17.3	-56.1
1960	277.5	257.6	108.8	103.9	132.2	-28.3	-84.4
1961	176.0	204.7	57.9	73.7	95.3	-21.6	-106.0
1962	172.3	208.4	37.8	68.2	97.9	-29.7	-135.7
1963	180.0	176.1	42.1	45.9	77.0	-31.1	-166.8
1964	85.8	146.0	15.1	31.7	59.0	-27.3	-194.1
1965	162.0	142.6	50.4	35.9	57.0	-21.1	-215.2
1966	464.7	237.5	325.2	130.2	117.8	12.4	-202.8
1967	153.1	259.9	27.6	134.4	133.9	.5	-202.3
1968	154.6	257.5	36.8	129.9	132.1	-2.2	-204.5
1969	270.1	192.6	83.8	49.4	87.4	-38.0	-242.5
1970	150.3	191.7	34.5	51.7	86.8	-35.1	-277.6
1971	127.5	182.6	27.7	48.7	81.0	-32.3	-309.9
1972	193.4	157.1	48.7	37.0	65.4	-28.4	-338.3
1973	242.7	187.9	79.4	51.9	84.4	-32.5	-370.8
1974	301.4	245.8	173.2	100.4	123.7	-23.3	-394.1
1975	116.9	220.3	46.9	99.8	105.9	-6.1	-400.2
1976	102.9	173.7	21.4	80.5	75.5	5.0	-395.2
1977	102.1	107.3	12.1	26.8	38.0	-11.2	-406.4
1978	217.7	140.9	104.9	46.1	56.0	-9.9	-416.3
1979	158.2	159.3	47.5	54.8	66.7	-11.9	-428.2
1980	201.1	192.3	74.5	75.6	87.2	-11.6	-439.8
1981	96.7	152.0	44.7	55.6	62.4	-6.8	-446.6
1982	162.6	153.5	37.3	52.2	63.3	-11.1	-457.7
1983	174.6	144.6	31.2	37.7	58.2	-20.5	-478.2
AVERAGE	194.8		75.5		89.7	-14.9	

EXPLANATION OF COLUMNS

- (1) ALAMOGORDO DAM TO STATE LINE
- (2) PROGRESSIVE 3-YEAR AVERAGE OF COLUMN (1)
- (3) ANNUAL GAGED OUTFLOW AT NEW MEXICO-TEXAS STATE LINE
- (4) PROGRESSIVE 3-YEAR AVERAGE OF COLUMN (3)
- (5) 1947 CONDITION INDEX OUTFLOW COMPUTED FROM EQ: $Y = 0.0489892 \cdot (X)^{.9142318}$
- (6) COLUMN (4) MINUS COLUMN (5)
- (7) CUMULATIVE TOTAL OF COLUMN (6)

Revised November 26, 1985 as stipulated by Texas and New Mexico
on November 18, 1985.